

# **1. THE MEDICAL MODEL, DIAGNOSTIC CATEGORIES OF MENTAL DISORDERS, AND THE PROBLEMS IN ASSESSMENT**

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## **1.1. MEDICAL MODEL**

The medical model in psychiatry is a "scientific process involving observation, description and differentiation, which moves from recognising and treating symptoms to identifying disease aetiologies and developing specific treatments" (Clare 1980 quoted in Shah and Mountain 2007 p375).

The medical model with its biological emphasis has been accused of being reductionist. The experience of "mental illness" is reduced to biological processes malfunctioning that can be treated by psychotropic drugs.

Shah and Mountain (2007) defended this approach by proposing a new definition of the medical model as "a process whereby, informed by the best available evidence, doctors advise on, coordinate or deliver interventions for health improvement. It can be summarily stated as 'does it work?'" (p375). They emphasised that the gathering of evidence to establish which interventions work is crucial.

An assumption of the medical model, which is less easy to assess with the maxim "does it work", is that outward symptoms are evidence of underlying diseases. The symptoms are clustered together and given names, like schizophrenia, in the classification systems of mental disorders used by psychiatrists and doctors.

Diagnostic categories are the basis of physical medicine, so it is not surprising that they are used in psychiatry as mental illness is just disease of the brain. Table 1.1 summarises some of the main arguments for and against the use of diagnostic categories (Furnham 2001).

ARGUMENTS FOR	ARGUMENTS AGAINST
<ol style="list-style-type: none"> <li>1. Gives psychiatrists a common language.</li> <li>2. Allows for controlled research.</li> <li>3. Can guide the treatment offered.</li> <li>4. Helps to discriminate normal from abnormal.</li> <li>5. Brings order to the "chaos" of mental illness.</li> <li>6. More objective than the alternatives.</li> <li>7. Helps psychiatrists maintain a professional distance from their patients.</li> <li>8. Aids doctors to give documentation for time off work etc.</li> </ol>	<ol style="list-style-type: none"> <li>1. The labels used dehumanise.</li> <li>2. Limited scientific evidence for the categories.</li> <li>3. The labels given influence how the person is perceived.</li> <li>4. The individuals with labels can be stigmatised.</li> <li>5. Individuals can be forced to fit into the category.</li> <li>6. Labels can produce self-fulfilling prophecies.</li> <li>7. The diagnostic categories become the textbook by which reality is checked.</li> <li>8. Individuals are perceived as patients unable to help themselves.</li> </ol>

Table 1.1 - Arguments for and against the use of diagnostic categories for mental illness.

## 1.2. DIAGNOSTIC CATEGORIES

Rather than looking at the many problems with using diagnostic categories, I want to concentrate here on the idea of "does it work" as proposed by Shah and Mountain as the new definition of the medical model. In particular, to look at examples of categories of mental disorder that are far from clear.

Now it could be said that includes most categories, but certain mental disorders are clearer (or better defined in terms of evidence) than others. Among the many categories of mental disorder in DSM-IV-TR (APA 2000), there are some that immediately lead to concerns (1).

DSM-IV-TR includes a chapter called "other conditions that may be a focus of clinical attention" and it contains categories of behaviour that are not found

elsewhere. These categories may exist where there is no mental disorder, where there is an unrelated mental disorder, or related to a mental disorder but "sufficiently severe to warrant independent clinical attention" (APA 2000 p731).

Here are some examples of problems listed in this chapter in DSM-IV-TR:

- Relational problems - "patterns of interaction between or among members of a relational unit that are associated with clinically significant impairment in functioning, or symptoms among one or more members of the relational unit, or impairment in the functioning of the relational unit itself" (p736).

This category includes parent-child relational problems (eg overprotection), partner relational problems (eg unrealistic expectations), sibling relational problems, and relational problems not otherwise specified (eg difficulties with co-workers).

- Adult antisocial behaviour - including "the behaviour of some professional thieves, racketeers, or dealers in illegal substances" (p740). There are no details of how antisocial behaviours are defined.
- Academic problems - "a pattern of failing grades or of significant underachievement in a person with adequate intellectual capacity (p741).
- Occupational problems - eg "job dissatisfaction and uncertainty about career choices" (p741).
- Religious or spiritual problems - eg "distressing experiences that involve loss or questioning of faith, problems associated with conversion to a new faith, or questioning of spiritual values that may not necessarily be related to an organized church or religious institution" (p741).
- Phase of life problems - problems associated with changes in life like entering school, starting a new career, or marriage and divorce.

It is not that these things are not problems, but should they be in a classification system for mental disorders. It is too much like every problem in life is now a mental disorder of some kind - "pathologizing" of everyday behaviour (Kutchins and Kirk 1997).

For them, DSM has become:

[A] guidebook that tells us how we should think about manifestations of sadness and anxiety, sexual activities,

alcohol and substance abuse, and many other behaviours  
(Kutchins and Kirk 1997 p11).

But if the medical model is scientific, there needs to be clear objective definitions of these categories, and there is not. Thus they should not be included, or is the classification system not scientific? Or, being cynical, psychiatrists just know what is a problem because of their expertise and do not need precise definitions. This is too much like the ideas with no evidence base that Shah and Mountain criticised.

It is also worrying that certain types of behaviour of thieves and drug-dealers are included here. These behaviours are defined as criminal which is a separate set of categories, or are we now saying that all criminal behaviour is mental illness? Where does that put the idea of personal responsibility?

The diagnostic categories of classification systems are based upon real diseases, it is claimed, but what about categories that change. A prime example is Passive-Aggressive Personality Disorder (PAPD)(Negativistic Personality Disorder). Originally included in DSM-III-R (APA 1987), but then moved to "criteria sets and axes provided for further study" in DSM-IV (APA 1994) because (Frances et al 2005):

- It described a behaviour reaction to an oppressive environment;
- It is more of a coping style than a personality disorder;
- It was rarely diagnosed in the absence of other personality disorders.

Is it a "real" category or not?

PAPD is "a pervasive pattern of negativistic attitudes and passive resistance to demands for adequate performance in social and occupational situations that begins by early adulthood and that occurs in a variety of contexts" (APA 2000 p789). Diagnosis is based upon four or more of these symptoms:

- Passively resists fulfilling routine social and occupational tasks;
- Complains of being misunderstood and unappreciated by others;
- Is sullen and argumentative;
- Unreasonably criticizes and scorns authority;
- Expresses envy and resentment toward those apparently more fortunate;
- Voices exaggerated and persistent complaints of personal misfortune;

- Alternates between hostile defiance and contrition (APA 2000 p791).

By Shah and Mountain's maxim of "does it work", this category of personality disorder does not as it was removed from the main body of DSM-IV, but why is it kept in the appendices? Again this is not to say that such behaviours do not exist, but I am questioning the scientific basis of the category.

### 1.3. CLASSIFICATION SYSTEMS

Whether the diagnostic categories of mental illness have a scientific basis is one thing, but it has to be remembered that DSM is not the only classification system used. The other system in common use is ICD-10 (WHO 1992).

But do the diagnostic categories have agreement for particular disorders? Andrews et al (1990) suggested that it depended upon the disorder. For substance abuse, only 33% of individuals were diagnosed by both DSM and ICD, while it was 87% for dysthymia.

Slade and Andrews (2001) looked at the diagnosis of generalised anxiety disorder (GAD) by both classification systems. The classification systems agreed on the existence of worry about everyday events over at least six months, but disagreed about the extent - excessive (DSM) or difficult to control (ICD) (table 1.2) (2).

<u>DSM-IV</u>	<u>ICD-10</u>
3 or more of following 6 symptoms: <ul style="list-style-type: none"> <li>- restlessness</li> <li>- easily fatigued</li> <li>- difficulty concentrating</li> <li>- irritability</li> <li>- muscle tension</li> <li>- sleep disturbance</li> </ul>	4 or more from 22 symptoms, but must be one of first four: <ul style="list-style-type: none"> <li>- palpitations</li> <li>- sweating</li> <li>- trembling</li> <li>- dry mouth</li> <li>- symptoms involving chest or abdomen (4 symptoms)</li> <li>- symptoms involving mental state (4)</li> <li>- general symptoms (2)</li> <li>- symptoms of tension (4)</li> <li>- other non-specific symptoms (4)</li> </ul>

Table 1.2 - Key features of GAD in DSM-IV and ICD-10.

Using data from the Australian National Survey of Mental Health and Well-Being (NSMHWB) of over 10 000 adults, Slade and Andrews found only a 41% agreement for diagnosis of GAD by both DSM-IV and ICD-10 (123 people). While 151 people were diagnosed with GAD using DSM-IV but not with ICD-10, and 201 people for the opposite.

There was reasonable agreement on the overall prevalence of GAD in the general population (2.6% DSM-IV, 3.0% ICD-10), but the "classification systems are diagnosing different groups of people" (p45).

#### **1.4. BIAS IN ASSESSMENT**

If we accept the diagnostic categories, there are issues related to their actual use.

The basis of science is objectivity , and being free from subjectivity or bias. But bias appears in relation to psychopathology in a number of ways (Haslam 2006).

##### 1.4.1. Assessment bias

This refers to distortions in the assessment and diagnosis process, and manifests itself in different ways.

i) Response biases by the person being assessed.

Individuals may not respond "honestly" when being assessed. In this context, "honestly" does not necessarily mean directly lying (though this does occur), it refers to failure to tell the whole truth. This could occur due to memory failings or lack of understanding of the questions - both problems with questionnaires.

For example, Kruijshaar et al (2005) found underestimated recall of lifetime episodes of major depression among Dutch and Australian populations using indirect estimation modelling.

In terms of tests, like reaction time, response bias could include a lack of motivation to do the test or to try "properly".

ii) Bias by the assessor.

For example, the attitudes of the assessor towards the measuring device being used can influence the results.

Soderberg et al (2005) found differences in reliability scores of the Global Assessment of Functioning (GAF) device depending on the attitudes of

Swedish psychiatric staff users towards or against it. Negative attitudes towards this device produced more distorted assessments by the staff.

iii) Bias by a third party informant.

De Los Reyes and Kazdin (2005) looked at how parents reported their child's problems to child psychiatrists using their Attribution Bias Context Model. There was evidence of the fundamental attribution error by the parents (and teachers). This is the overemphasis of dispositional (individual) factors as the cause of the problem rather than situational (or context) factors (which the children used to explain their own problems).

Also observers (parents, teachers) are more likely to access information about negative aspects of the children's behaviour from memory.

iv) Bias in the assessment instrument.

For example, the General Health Questionnaire (GHQ) (3) could produce false positives in relation to anxiety and depression (Bell et al 2005). This means that respondents are gaining scores which reach the threshold of problems, when they do not have anxiety or depression according to other means of assessment, because of the nature of the assessment device.

They found a higher estimate of prevalence among the financially better off and those with better social support compared to the Revised Clinical Interview Schedule among nearly 7500 patients of GPs in the Bristol and South Wales areas.

Other bias here includes unreliability of unstructured interviews, over-diagnosis from self-reports, and gender bias in diagnosis of certain disorders based on answers given.

v) Bias due to underlying assumptions of assessment instrument.

Assessment instruments are often based on the assumption of separate categories of behaviour or disorder as opposed to dimensions. For example, assessing personality disorders as separate categories can produce bias if they are better viewed as dimensions or vice versa.

DSM-IV sets out criteria for the diagnosis of personality disorders as "an idealised typical case" which is not found in real life (Farmer et al 2002).

These are based on the idea of types or traits, which compares with the predominate view of personality as dimensions.

But the use of dimensions would assume that the characteristics are present in all individuals, but exaggerated in those with personality disorders (Marlowe 1996).

The use of types or prototypes means that there has to be a cut-off point. Who decides the cut-off point for inclusion or exclusion within the category? Often a panel of experts (Widiger 1993).

If the cut-off point is the presence of five characteristics from a list, how to view the individual with four of those characteristics, and how do they compare to an individual with one (Widiger and Corbitt 1994)?

#### 1.4.2. Demographic bias

This category of biases relates to distortions in psychiatric practice around demographic characteristics, like gender or ethnicity.

i) Over-diagnosis of particular disorders in one group relative to other groups.

For example, Shaw et al (1999) recorded the one-month prevalence of anxiety and depression, using ICD-10 categories, in central Manchester. There were differences in the rates of the two disorders based on ethnicity, but also gender (table 1.3).

Disorder	A-C Male	A-C Female	A-C Total	White Male	White Female	White Total
Depression	4	19	13	7	11	9
Anxiety	0	5	3	7	10	9

(A-C = Afro-Caribbean)  
(After Shaw et al 1999)

Table 1.3 - Percentages of sample showing anxiety and depression based on ethnicity and gender.

ii) Over-emphasis of certain fact for one group over another.

Flanagan and Blashfield (2005) presented to 99 US psychologists and psychiatrists case vignettes (table 1.4) for diagnosis of histrionic or antisocial personality disorder. The gender was varied in the

vignettes. Histrionic personality disorder diagnoses were made more often if the case was female and antisocial personality disorder for males. In the diagnosis process, greater weight was given to gender stereotype consistent characteristics: eg concern for physical appearance linked to women.

#### Antisocial Personality Disorder

A woman who had been working as part of the sports staff for a small city newspaper was referred for a psychiatric evaluation after three arrests for drunken and reckless driving. The woman had been an energetic member of the newspaper staff, and her peers were surprised to learn of her arrests. She had been an English major at a small, liberal college from the mid-Atlantic states.

The woman had become very interested in local sports, especially in the athletic training programs of two colleges in the surrounding areas. One had an excellent fencing team; the other was known for its programs in soccer and cross-country running.

She frequently travelled with the teams from these schools and was liked by the coaches. Being bright and having a gift for pithy humour, she proved a valuable resource on the sports section staff. It was at the urging of her editor that the woman decided to see a therapist.

In her history, the woman reported that she had frequently run away from home as a teenager and had been arrested for a number of minor thefts. Lying became a standard means of coping.

As an adult, she had trouble holding down a job because of her frequent absences. She admitted to continuing her adolescent behaviour of shoplifting into the present, though she had never been detected.

At one point, she tried working as a middle-person in a group selling prescription drugs. She had no misgivings or sorrows about her behaviour.

(Flanagan and Blashfield 2005 p1497)

#### Table 1.4 - Examples of vignette of Antisocial Personality Disorder.

Kaplan (1983) argued that the DSM-III criteria for Dependent Personality Disorder (DPD) were quite similar to the traditional female sex-role, and "singles out for scrutiny and therefore diagnosis the ways in which women express dependency but not the ways in which men express dependency" (p789).

For example, the financial dependence of the non-working wife on the working husband is symptomatic of DPD, but not the dependency of the husband on the wife to maintain the household and perform the child-rearing tasks (Bornstein 1993).

iii) Underlying assumptions about one group as distinct to others.

The history of psychiatry (and psychology) includes ethnocentric assumptions about non-Western cultures, and today about ethnic minorities within Western society (Raimundo Oda et al 2005).

iv) Discriminatory practices in treatment.

The use of particular treatments more often with one group than another. Takei et al (1998) followed up 81 patients first admitted to a psychiatric hospital in 1973-4 with a diagnosis of "functional psychosis". The research found differences in the mean length of admission, and mean number of admissions to hospital based on ethnicity (table 1.5).

Brewer (2004) explored three possible reasons for ethnic differences in rates of mental disorder:

- Biological differences in the levels of incidence between ethnic groups;
- Social causes for the different rates;
- Distortions in the figures.

	Schizophrenia/Non-White	Schizophrenia/Non-Afro-Caribbean
Mean length of admission to psychiatric hospital (days)	124.4 / 72.9	272.8 / 67.7
Mean number of admissions to psychiatric hospital	3.4 / 2.8	5.3 / 3.1

(After Takei et al 1998)

Table 1.5 - Comparison of admission to psychiatric hospital based on ethnicity.

#### 1.4.3. Institutional bias

Haslam (2006) described these biases as "influences on psychiatric practice that derive from financial or political pressures" (p625).

i) Bias from financial pressures.

The best example here is financial conflict of interest as produced by pharmaceutical industry sponsorship of clinical trials. In an extensive review,

Perlis et al (2005) found that such sponsored studies were nearly five times as likely to find the medicine superior to the placebo for psychotropic drugs.

ii) Bias from legal and political pressures.

One way this can produce bias is through the institutions or individuals that take part in studies. For example, hospitals that cannot gain funding to join a study, or individuals concerned about involvement in clinical trials because of privacy rules could both distort the sample studied and consequently the generalisability of findings.

#### 1.4.4. Methodological bias

There are errors in study design that can lead to biased results.

i) Sampling bias.

Whether the study participants are selected randomly or referred by doctors, for example. Furthermore, who is referred.

Brewer (2003) noted the problems of using outpatients or inpatients for rates of Dependent Personality Disorder:

- Outpatients - underestimates as some individuals do not seek treatment;
- Inpatients - overestimates as "institutionalisation" can produce symptoms of dependency (Booth 1996).

Widiger and Spitzer (1991) noted that the characteristics of the setting can influence the findings: eg Veterans Administration hospital compared to State psychiatric hospital or private facility in the USA.

ii) Non-response bias.

The sample chosen for the study may be representative, but distorted by the numbers who non-respond (or drop-out during the study). Non-responders in survey research are often suffering more from the disorder being studied (Haslam 2006).

Hofler et al (2005) were more optimistic: "a non-response rate of, say, 10% will probably not induce a strong bias unless non-participation is strongly

associated with the parameters of interest" (p292).

iii) Bias in control groups.

In clinical trials, control groups are the "normals" who do not have the disorder in the experimental group, but they may have other problems. Bunce et al (2005) found that 44.4% of 341 healthy volunteer controls, for biological research at a US medical college had personality disorders.

Most common were Obsessive-Compulsive Personality Disorder (7.0%) and Narcissistic Personality Disorder (6.2%) among those diagnosed, while 24.9% had Personality Disorder Not Otherwise Specified.

iv) Publication bias (or the file-drawer effect).

The tendency to publish studies with the strongest findings and ignore those with non-significant results. There is a debate as to whether to include unpublished ("grey") studies in meta-analysis (4)(Haslam 2006).

Smith and Egger (1998) reported a study by Nakielny (1993) which used unpublished data on the efficacy of selective serotonin reuptake inhibitors (SSRI) over tricyclic anti-depressants (TCA). It showed a much greater success rate for the SSRIs than other similar studies using only published data. Nakielny was sponsored by Lilly Industries, who make a type of SSRI.

### **1.5. FOOTNOTES**

1. DSM-IV had 297 categories (Shorter 1997) or 330 including the appendices (Stone 1998).

2. Interestingly, many of these behaviours were placed under the category "psychoneurotic disorder" in DSM-I (APA 1952), "anxiety neurosis" and "phobic neurosis" in DSM-II (APA 1968), and "Anxiety Disorders" in DSM-III (APA 1980) (Kutchins and Kirk 1997).

3. General Health Questionnaire (Goldberg 1972) contains 60 self-administered questions with a four-point scale.

4. Meta-analysis is a technique of statistical analysis of the results from a large number of individual research studies, so as to integrate the findings (Wood 1995).

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